

C L A I M S

1. An image compression and decompression apparatus comprising:

an identification section which identifies given
5 color image information and outputs an identification signal;

a conversion section which converts said color image information to color image information with a specified length in units of blocks;

10 a characteristics correction section which corrects block-based color image information converted in said conversion section with respect to characteristics thereof in units of said blocks based on an identification signal output from said
15 identification section;

an image compression section which compresses an image corrected in said characteristics correction section in units of said blocks and stores the compressed image in a storage area; and

20 a decompression section which decompresses a compressed image stored in said storage area in units of said blocks.

2. The image compression and decompression apparatus according to claim 1, wherein said
25 characteristics correction section corrects an average value of three RGB signals and each of RGB outputs to a value resulting in a black character based on a

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compression unit according to a black character
identification signal from said identification section.

3. An image compression and decompression
apparatus comprising:

5 an identification section which identifies given
color image information and outputs an identification
signal;

 a characteristics correction compression section
which corrects characteristics of color image
10 information during compression of said color image
information and stores the corrected and compressed
color image information in a storage area; and

 a decompression section which decompresses a
corrected and compressed color image stored in said
15 storage area.

4. The image compression and decompression
apparatus according to claim 3, wherein the
characteristics correction compression section at least
comprises a brightness/color-difference conversion
20 section which converts RGB image signals as color image
information received from said identification section
to a brightness/color-difference signal, an error
diffusion section which applies error diffusion to
this brightness/color-difference signal, and a
25 characteristics correction section which corrects
characteristics of said color image information by
using an output from said error diffusion section and

an identification result of said identification section.

5. An image compression and decompression apparatus comprising:

5 an identification section which identifies given color image information and outputs an identification signal;

10 a conversion section which converts said color image information to color image information with a specified length in units of blocks;

 an image compression section which compresses said color image information converted in said conversion section in units of said blocks and stores the compressed color image information in a storage area;

15 a decompression section which decompresses a compressed image stored in said storage area in units of said blocks; and

20 a characteristics correction section which corrects characteristics of color image information decompressed in said decompression section based on an identification signal output from said identification section.

25 6. The image compression and decompression apparatus according to claim 5, wherein said identification section outputs an identification signal from said color image information by identifying not only a black character, but also black and color

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characters, and said characteristics correction section corrects color image information decompressed in said decompression section with respect to chroma based on an identification signal identified as black and color characters.

7. An image compression and decompression apparatus comprising:

an identification section which identifies given color image information and outputs an identification signal;

a compression mode setting section which sets compression mode as a compression method for at least one of said color image information and said identification signal from said identification section;

a compression section which compresses at least one of said color image information and said identification signal for storage in a storage area according to compression mode specified by said compression mode setting section; and

a decompression section which decompresses at least one of said color image information compressed in said compression section and said identification signal according to said compression mode specified in said compression mode setting section.

8. The image compression and decompression apparatus according to claim 7, wherein the compression section comprises an image compression section having a

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selector which selects identification signals output
from the identification section according to a mode
table based on said compression mode supplied from said
compression mode setting section and having an image
5 compression circuit which compresses color image
information according to a signal output therefrom, and
an identification compression section having a selector
which selectively outputs an identification signal
output from the identification section according to a
10 mode table based on said compression mode and a
compression identification signal compressed in an
identification compression circuit.

9. The image compression and decompression
apparatus according to claim 7, wherein the compression
15 mode setting section comprises at least a mode not
using an identification signal output from said
identification section, a mode using an identification
signal, and a mode using an identification signal by
compressing and decompressing the same.

20 10. An image compression and decompression
apparatus comprising:

a brightness/color-difference conversion section
which converts RGB image information as given color
image information to brightness and color difference
25 and outputs a brightness/color-difference signal;

an identification section which determines whether
complementary color relationship is contained in said

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brightness/color-difference signal output from said
brightness/color-difference conversion section;

an image compression section which compresses said
color image information and stores the same in a
5 storage area when said identification section
determines that no complementary color relationship is
included and which compresses said color image
information through a different method or processes the
same differently and stores the same in a storage area
10 when it is determined that complementary color
relationship is included; and

an image decompression section which decompresses
compressed color image information stored in said
storage area.

15 11. An image compression and decompression method
comprising:

an identification step for identifying given color
image information and outputting an identification
signal;

20 a conversion step for converting said color image
information to block-based color image information
having a specified length;

a characteristics correction for correcting block-
based color image information converted at said
25 conversion step with respect to characteristics thereof
in units of said blocks based on an identification
signal output from said identification step;

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an image compression step for compressing an image corrected at said characteristics correction step in units of said blocks and storing the same in a storage area; and

5 a decompression step for decompressing a compressed image stored in said storage area in units of said blocks.

12. The image compression and decompression method according to claim 11, wherein said characteristics
10 correction step corrects an average value of three RGB signals and each of RGB outputs to a value resulting in a black character according to a black character identification signal from said identification section.

13. An image compression and decompression method
15 comprising:

an identification step for identifying given color image information and outputting an identification signal;

20 a characteristics correction compression step for correcting characteristics of color image information during compression of said color image information and storing the corrected and compressed color image information in a storage area; and

25 a decompression step for decompressing a corrected and compressed color image stored in said storage area.

14. The image compression and decompression method according to claim 13, wherein the characteristics

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correction compression step comprises at least a
brightness/color-difference conversion step for
converting RGB image signals as color image information
received from said identification step to a
5 brightness/color-difference signal, an error diffusion
step for applying error diffusion to this brightness/
color-difference signal, and a characteristics
correction step for correcting characteristics of said
color image information by using an output from said
10 error diffusion step and an identification result of
said identification step.

15. An image compression and decompression method
comprising:

an identification step for identifying a black
15 character from given color image information and
outputting an identification signal;

a conversion step for converting said color image
information to color image information with a specified
length in units of blocks;

20 an image compression step for compressing said
color image information converted in said conversion
step in units of said blocks and storing the compressed
color image information in a storage area;

a decompression step for decompressing a
25 compressed image stored in said storage area in units
of said blocks; and

a characteristics correction step for correcting

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characteristics of color image information decompressed
in said decompression step based on an identification
signal output from said identification step.

16. The image compression and decompression method
5 according to claim 15, wherein said identification step
outputs an identification signal from said color image
information by identifying not only a black character,
but also black and color characters, and said
characteristics correction step corrects color image
10 information decompressed in said decompression step
with respect to chroma based on an identification
signal identified as black and color characters.

17. An image compression and decompression method
comprising:
15 an identification step for identifying given color
image information and outputting an identification
signal;

a compression mode setting step for setting
compression mode as a compression method for at least
20 one of said color image information and said
identification signal from said identification step;

a compression step for compressing at least one of
said color image information and said identification
signal for storage in a storage area according to
25 compression mode specified by said compression mode
setting step; and

a decompression step for decompressing at least

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one of said color image information compressed in said compression step and said identification signal according to said compression mode specified in said compression mode setting step.

5 18. The image compression and decompression method according to claim 17, wherein the compression step comprises an image compression step using a selector for selecting identification signals output from the identification step according to a mode table based on
10 said compression mode supplied from said compression mode setting step and having an image compression circuit for compressing color image information according to a signal output therefrom, and an identification compression step using a selector for
15 selectively outputting an identification signal output from the identification step according to a mode table based on said compression mode and a compression identification signal compressed in an identification compression circuit.

20 19. The image compression and decompression method according to claim 17, wherein the compression mode setting step comprises at least a mode not using an identification signal output from said identification step, a mode using an identification signal, and a mode
25 using an identification signal by compressing and decompressing the same.

20. An image compression and decompression method

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comprising:

a brightness/color-difference conversion step for
converting RGB image information as given color image
information to brightness and color difference and
5 outputting a brightness/color-difference signal;

an identification step for determining whether
complementary color relationship is contained in said
brightness/color-difference signal output from said
brightness/color-difference conversion step;

10 an image compression step for compressing said
color image information and storing the same in a
storage area when said identification step determines
that no complementary color relationship is included
and for compressing said color image information
15 through a different method or processing the same
differently and storing the same in a storage area when
it is determined that complementary color relationship
is included; and

an image decompression step for decompressing
20 compressed color image information stored in said
storage area.

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